

REMARKS

Applicant respectfully requests entry of the amendments and remarks submitted herein. Claims 1, 7, 8, 20, 26, 29, 30, 31, 40 and 42 have been amended herein. To expedite prosecution, the claims have been limited to *A. marginale* species and amended to recite a 'mammalian nucleated monkey cell' and the corresponding dependent claims have been amended to remove the reference to non-monkey types of cells. In addition, claims 2-6, 9-19, 21-25, 27, 32-39, 41 and 43-46 have been canceled herein without prejudice to continued prosecution

Claims 1, 20, 26, 28, 29, 31, 40 and 42 are currently pending, and claims 7, 8 and 30 are withdrawn. Reconsideration of the pending application is respectfully requested.

Claim Objection

Claims 29 and 35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The 35 U.S.C. §112 Rejection

Claims 40-43, 45 and 46 stand rejected under 35 U.S.C. §112, second paragraph, as the Examiner asserted that those claims are indefinite for failing to particularly point out and distinctly claim the subject matter that Applicant regards as the invention. Applicants respectfully traverse this rejection.

According to the Examiner, independent method claim 40 (claim 43 has been canceled herein without prejudice to continued prosecution) does not set forth any steps involved in isolating the microorganism from the cells. Claim 40 is not limited to any particular method of isolating *A. marginale* from the mammalian cells and, contrary to the Examiner's assertion, independent claim 40 are not indefinite for failing to recite steps for isolating the *Anaplasma* species.

Also according to the Examiner, the reference to 'attenuated' in claim 42 (claim 45 has been canceled herein without prejudice to continued prosecution) "is vague as there is no specific

definition for the attenuation specified in the preamble.” Claim 42 has been amended herein to indicate that the recited *Anaplasma* species is cultured under conditions in which the respective species is attenuated. As amended herein, claim 42 is not indefinite.

In view of the amendments and remarks herein, Applicant respectfully requests that the rejection of claims 40-43, 45 and 46 under 35 U.S.C. §112, second paragraph, be withdrawn.

The 35 U.S.C. §102 Rejection

Claims 1, 2, 9, 10, 18, 20, 21, 22, 24, 26-27, 31, 32, 37 and 38 stand rejected under 35 U.S.C. §102(b) as being anticipated by Waghela et al. (1997, *Vet. Parasitol.*, 73:43-52); claims 1, 2, 9, 10, 18, 40-43 and 45-46 stand rejected under 35 U.S.C. §102(b) as being anticipated by Blouin et al. (1993, *Revue Elev. Med. Vet. Pays. Trop.*, 46:49-56); and claims 20-22, 24, 26-28, 31, 32, 37 and 38 stand rejected under 35 U.S.C. §102(b) as being anticipated by Marble (US Patent No. 3,616,202). According to the Examiner, Waghela et al. teach a continuous culture of *A. marginale* in bovine erythrocytes co-cultured with endothelial cells; Blouin et al. teaches methods of culturing tick-derived *A. marginale* in bovine turbinate and endothelial cells; and Marble teaches a method for culturing *A. marginale* in mammalian nucleated and adherent cells (i.e., rabbit bone marrow). This rejection is respectfully traversed.

The present application discloses that *A. marginale* can be passaged for at least 9 months and still remain infective (see paragraph [0031] of the present application). In fact, the present specification discloses that *A. marginale* can be cultured in mammalian cells for “weeks, months, or years” (see paragraph [0026] of the present application). It is noted herein that monkey cells infected with *A. marginale* can be cultured virtually indefinitely without a loss in number or infectivity.

With respect to Waghela et al., Waghela et al. discloses that *A. marginale* could be maintained for a longer period of time in erythrocytes when co-cultured with endothelial cells. Waghela et al., however, also discloses that *A. marginale* can only be grown for a limited number of passages in the co-culture system, “which will facilitate the development of a continuous culture of the [*Anaplasma*] organism.” See the Abstract.

With respect to the Blouin et al. reference, Blouin et al. teaches that, following a number of passages of the *A. marginale*-infected mammalian nucleated cells, the *A. marginale* does not

increase in number. See, for example, the first 20 lines of text on page 53, which also discloses that, over time, the number of inclusions decreased and were lost; that the inclusions in older cultures were generally devoid of internal structure; and that after about 10 days, inclusions were found but did not increase in number following passaging. Based on this description, Blouin et al. does not teach stable infection of mammalian nucleated cells with *A. marginale*.

With respect to Marble, Marble does not disclose continuous culturing of *A. marginale*. Instead, Marble teaches that fresh rabbit bone marrow must be used, which would require rabbits to be regularly sacrificed. Although Marble discloses that *A. marginale* remained infective “even after 140 days (20 passages)” (see the last sentence of Marble’s specification), as discussed herein, the present application discloses that *A. marginale* could be passaged for greater than 9 months and up to several years and still remain infective.

As described herein, none of the cited references discloses the stable infection of mammalian kidney nucleated cells and, therefore, the pending claims are not anticipated by any of the cited references. In view of the amendments and remarks herein, Applicant respectfully requests that the rejections of the pending claims under 35 U.S.C. §102(b) be withdrawn.

Request for Rejoinder

Claims 7, 8 and 30 were withdrawn as directed to a non-elected species following the Restriction Requirement of April 18, 2007 and Applicant’s election of June 18, 2007. Since claim 1 should be allowable in view of the amendments and remarks herein, Applicant respectfully requests that claims 7, 8 and 30 be rejoined and allowed pursuant to MPEP §806.04.

CONCLUSION

Applicants respectfully request allowance of claims 1, 7, 8, 20, 26, 28, 29, 30, 31, 40 and 42. Please apply any charges or credits to Deposit Account No. 06-1050.

Applicant : Ulrike G. Munderloh
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Page : 7 of 7

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Respectfully submitted,

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/M. Angela Parsons/

Date: _____

M. Angela Parsons, Ph.D.
Reg. No. 44,282

Fish & Richardson P.C.
60 South Sixth Street, Suite 3300
Minneapolis, MN 55402
Telephone: (612) 335-5070
Facsimile: (612) 288-9696

60445470.doc